

## MEMORANDUM

<b>TO</b>	Dawn MacNeil, STPA	<b>FILE NO.</b>	S-1152-08
<b>FROM</b>	Peter Ibrahim	<b>SHIFT:</b>	0630 to 1700
<b>TEL</b>	(902) 539-3012	<b>CC:</b>	Shawn Bernon, STPA
<b>FAX</b>	(902) 539-3381		Wilfred Kaiser, STPA
<b>DATE</b>	17 <sup>th</sup> June, 2008		Terry Smith, ALL-TECH
		<b>STPA NO.</b>	<b>PS-0017</b>

**SUBJECT: 16<sup>th</sup> June, 2008, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – North Pond Pilot Study  
FINAL REPORT**

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Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 16<sup>th</sup> of June, 2008. Donald MacIsaac and Reg Peters of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:

- Overcast giving way to sunny periods
- Temperature: approximately 15°C
- Wind Direction: Northwest

**Comments:** *ALL-TECH was on-Site at 0630 and sampling began as soon as there was site activity. Air monitoring was performed during EarthTech's construction activities.*

All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

All downwind and upwind measurements of Total Volatile Organic Compounds (TVOC) were below the established Site Action Level for this parameter of 0.66 ppm. Each measurement is the average of a 15 minute sample. A minimum of 2 samples were taken downwind and 1 sample upwind every hour. All measurements were found to be below the detection limit of the instrument. Levels above detection limit will be noted in the table below.

Due to operational criteria, during periods of precipitation (snow and rain) and high humidity, TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Donald MacIsaac and reviewed by Peter Ibrahim and Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



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Peter Ibrahim

**ALL-TECH Environmental Services Cape Breton Ltd.**

Copied via e-mail:

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**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – North Pond Pilot Study**  
**16<sup>th</sup> June, 2008**

<b>Sample No. &amp; Air Monitoring Location</b>	<b>Time of Day</b>	<b>PM<sub>10</sub> Action Level (µg/m<sup>3</sup>)</b>	<b>Average Result (µg/m<sup>3</sup>)</b>	<b>Wind Direction</b>	<b>Relative Position</b>	<b>Description of Activity</b>	<b>Observations that may affect sample</b>
1 30m Northeast of North Pond Gate	0730	155	14	Northwest	Upwind	Background	No observations seen to effect sampling integrity
2 15m Northeast of Ferry St. Bridge	0715	155	10	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
3 15m Northeast of Ferry St. Bridge	0745	155	10	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
4 30m Northeast of North Pond Gate	0800	155	13	Northwest	Upwind	Background	No observations seen to effect sampling integrity
5 15m Northeast of Ferry St. Bridge	0800	155	12	Northwest	Downwind	Machines moving materials	No observations seen to effect sampling integrity
6 15m Northeast of Ferry St. Bridge	0840	155	13	Northwest	Downwind	Machines moving materials	No observations seen to effect sampling integrity
7 30m Northeast of North Pond Gate	0900	155	14	Northwest	Upwind	Background	No observations seen to effect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
8 15m Northeast of Ferry St. Bridge	0900	155	12	Northwest	Downwind	Machines moving materials	No observations seen to effect sampling integrity
9 15m Northeast of Ferry St. Bridge	0945	155	5	Northwest	Downwind	Machines moving materials	No observations seen to effect sampling integrity
10 30m Northeast of North Pond Gate	1000	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
11 15m Northeast of Ferry St. Bridge	1000	155	3	Northwest	Downwind	Machines moving materials	No observations seen to effect sampling integrity
12 15m Northeast of Ferry St. Bridge	1045	155	4	Northwest	Downwind	Machines moving materials	No observations seen to effect sampling integrity
13 30m Northeast of North Pond Gate	1105	155	6	Northwest	Upwind	Background	No observations seen to effect sampling integrity
14 20m Northeast of Ferry St. Bridge	1100	155	1	Northwest	Downwind	Machines moving materials	No observations seen to effect sampling integrity
15 20m Northeast of Ferry St. Bridge	1130	155	5	Northwest	Downwind	Machines moving materials	No observations seen to effect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
16 30m Northeast of North Pond gate	1200	155	2	Northwest	Upwind	Background	No observations seen to effect sampling integrity
17 20m Northeast of Ferry St. Bridge	1200	155	2	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
18 20m Northeast of Ferry St. Bridge	1245	155	3	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
19 30m Northeast of North Pond gate	1300	155	3	Northwest	Upwind	Background	No observations seen to effect sampling integrity
20 20m Northeast of Ferry St. Bridge	1300	155	3	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
21 20m Northeast of Ferry St. Bridge	1330	155	3	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
22 30m Northeast of North Pond gate	1400	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
23 20m Northeast of Ferry St. Bridge	1400	155	2	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
24 20m Northeast of Ferry St. Bridge	1440	155	3	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
25 30m Northeast of North Pond gate	1500	155	7	Northwest	Upwind	Background	No observations seen to effect sampling integrity
26 20m Northeast of Ferry St. Bridge	1500	155	6	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
27 20m Northeast of Ferry St. Bridge	1545	155	5	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
28 30m Northeast of North Pond gate	1600	155	4	Northwest	Upwind	Background	No observations seen to effect sampling integrity
29 20m Northeast of Ferry St. Bridge	1600	155	4	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity
30 20m Northeast of Ferry St. Bridge	1615	155	2	Northwest	Downwind	No activity observed on-site	No observations seen to effect sampling integrity

**Notes:** Air sample duration for each monitoring event was 15 minutes.

### Comparison of Downwind Daily Results for Dust Budget

Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
15m Northeast of Ferry St. Bridge	0700 to 0759	10	990
15m Northeast of Ferry St. Bridge	0800 to 0859	23	990
15m Northeast of Ferry St. Bridge	0900 to 0959	32	990
15m Northeast of Ferry St. Bridge	1000 to 1059	36	990
20m Northeast of Ferry St. Bridge	1100 to 1159	39	990
20m Northeast of Ferry St. Bridge	1200 to 1259	42	990
15m Northeast of Ferry St. Bridge	1300 to 1359	45	990
15m Northeast of Ferry St. Bridge	1400 to 1459	48	990
20m Northeast of Ferry St. Bridge	1500 to 1559	54	990
20m Northeast of Ferry St. Bridge	1600 to 1659	57	990

### VOC Monitoring

Monitoring Method	Yes	No
Sustained Odours Observed		•
P.I.D. Required	•	